CITY ROADLOG PILOT PROJECT
PAVEMENT CONDITION REPORT 2005

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BACKGROUND:

RCW 46.68.113: *During the 2003-2005 biennium, cities and towns shall provide to the transportation commission, or its successor entity, preservation rating information on at least seventy percent of the total city and town arterial network. Thereafter, the preservation rating information requirement shall increase in five percent increments in subsequent biennia. The rating system used by cities and towns must be based upon the Washington state pavement rating method or an equivalent standard approved by the transportation commission or its successor entity.*

RCW 46.68.113 requires that cities report the pavement condition of their arterial routes on a biennial basis. The initial reporting effort occurred in the summer of 2004 when 28 cities with the greatest arterial mileage reported pavement rating information to Highways & Local Programs (H&LP). Continuing this effort requires that an increasing percentage (5%) of the arterial system be reported each biennium.

To accomplish this requires reporting from smaller and smaller cities and towns as biennium's progress. Many of these smaller cities and towns have insufficient resources to meet this requirement in a timely and efficient manner. In order to assist the smaller cities in meeting the reporting requirements; H&LP has secured the services of the WSDOT Materials Laboratory to survey and video the federally functionally classified arterial and collector routes in all the state's cities and towns with a population under 22,500.

Since RCW 47.26.090 defines arterial routes to include those designated as "collectors" the decision was made to gather condition and image data on collector routes as well.

A pilot project to test the feasibility of accomplishing this work using Mats Lab personnel and equipment was conducted in the spring of 2005. The pilot project involved the collection of data from 10 Western Washington cities with arterial mileage totaling 77.61 centerline miles and 114.73 collector centerline miles. The pilot program was successful and planning has been accomplished to carry this program forward on an on-going basis with Eastern Washington cities being surveyed in 2006 and Western Washington cities in 2007. As this cycle repeats, all the cities under 22,500 will be surveyed each biennium.

DISCUSSION:

The following table summaries the data collected for the 10 cities in the Pilot Project:

Functional Class	Federally Classified C/L Miles	Field Measured C/L Miles	Ave. Rating Score
Arterial Routes	77.82	77.61	67
Collector Routes	112.92	114.73	63
Totals	**190.74**	**192.34**	**65**

THE ARTERIAL NETWORK:

City Data: The combined principal and minor arterial network information for each city is shown in the table below.

City	Federally Classified C/L Miles	Field Measured C/L Miles	Ave. Rating Score
Aberdeen	5.64	5.35	49
Camas	15.90	11.38	65
Centralia	5.93	7.68	89
Chehalis	9.79	8.74	81
Hoquiam	1.50	1.74	74
Kelso	9.96	10.61	71
Ocean Shores	0.00	0.00	-
Shelton	6.35	6.44	62
Tumwater	16.21	18.30	71
Washougal	6.54	7.38	52
Totals	**77.82**	**77.61**	**67**

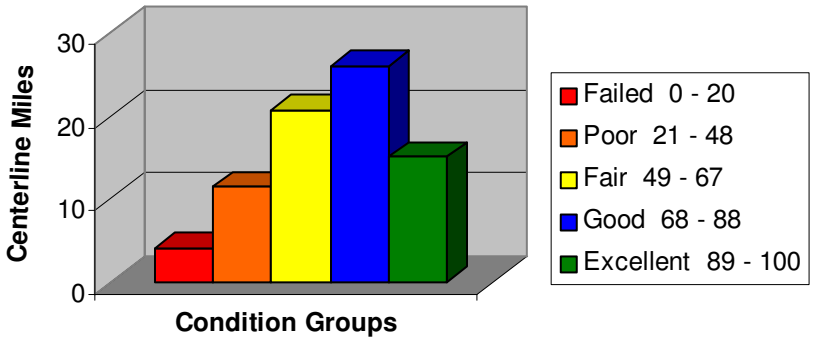
Pilot Project Arterial Data

The range of average rating scores within the various cities is fairly large and runs from a low of 49 in Aberdeen to a high of 89 in Centralia with the overall average at the mid-point of the range at 67.

Condition Groups: The following pavement rating condition groups show the distribution of the arterial lane mileage within the various condition groupings. The distribution shows that 20.2% of the arterial centerline mileage falls within the failed to poor category and that 53.1% of the centerline mileage falls within the good to excellent categories. The remaining 26.8% falls into the central fair category. Since the pilot project was the first arterial reporting effort we will have to wait until future biennium's to determine if the arterial network is gaining or losing ground overall.

Condition Group	Field Measured C/L Miles	Ave. Rating Score	Percentage
Failed 0-20	4.08	12	5.3%
Poor 21-48	11.53	38	14.9%
Fair 49-67	20.80	57	26.8%
Good 68-88	26.09	78	33.6%
Excellent 89-100	15.11	97	19.5%

Distribution of arterials within the pavement condition rating groups

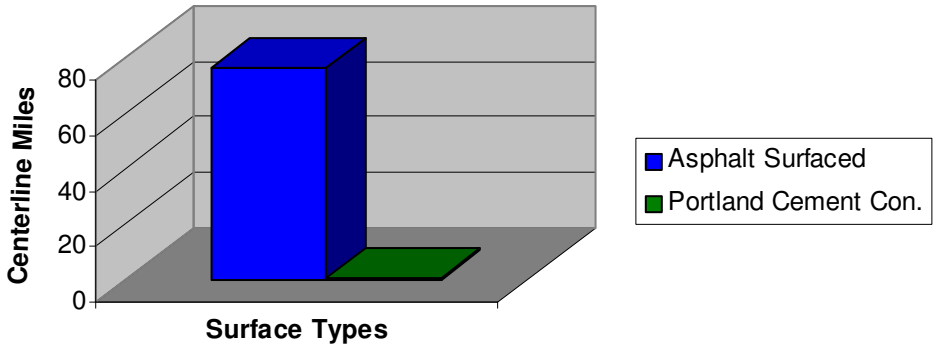


Arterial centerline mileage within condition groups

Surface Types: The following table and chart show the distribution of the pavement surface types within the arterial network. As would be expected, the majority of the lane mileage is comprised of asphalt surfaced pavement at 98.8%. This can consist of hot mix asphalt, bituminous surface treatment, or slurry seals. Portland cement concrete at 1.2% makes up only a tiny portion of the arterial network surveyed.

Pavement Type	Field Measured C/L Miles	Ave. Rating Score	Percentage
Asphalt Surfaced	76.65	67	98.8%
Portland Cement Concrete	0.96	85	1.2%

Arterial surface types



Arterial centerline mileage by surface type

THE COLLECTOR NETWORK:

City Data: The following table summaries the collector data gathered for each city.

City	Federally Classified C/L Miles	Field Measured C/L Miles	Ave. Rating Score
Aberdeen	15.61	15.08	62
Camas	7.78	8.78	61
Centralia	12.00	13.48	60
Chehalis	2.98	3.02	75
Hoquiam	13.10	12.44	71
Kelso	11.56	11.70	59
Ocean Shores	22.87	21.48	68
Shelton	8.69	10.01	54
Tumwater	11.51	11.40	67
Washougal	6.82	7.35	60
Totals	**112.92**	**114.73**	**63**

Collector data for each city

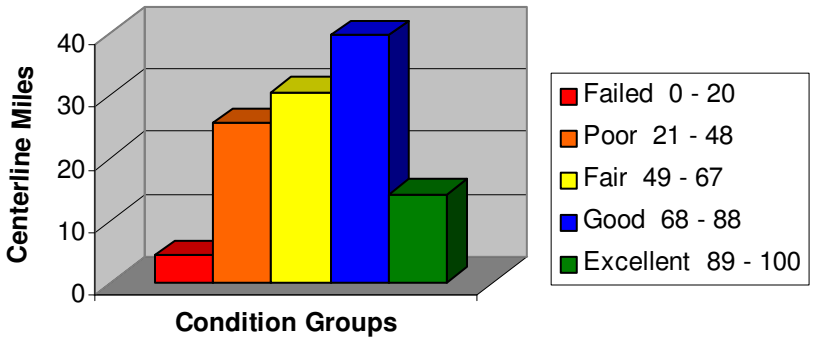
The range of average rating scores within the various cities was smaller for the collectors than for the arterials. They ranged from a low of 54 in Shelton to a high of 75 in Chehalis with the overall average at the mid-point of the range at 63. With a few exceptions, the cities average rating scores for collectors are not very consistent with the cities average scores for arterials. Centralia has the largest difference with an average score of 89 for their arterials and a 60 for the collector network. The correlation coefficient between the cities arterial and collector average rating scores is low at 0.40.

Condition Groups: The following pavement rating condition groups show the distribution of the collector lane mileage within the various condition groupings.

The distribution shows that 26.2% of the collector centerline mileage falls within the failed to poor category and that 47.1% of the centerline mileage falls within the good to excellent categories. The remaining 26.8% falls into the central fair category. The collector distribution within condition groups shows good correlation with the distribution shown by the arterial network. The correlation coefficient between arterial and collector condition group distribution percentages is 0.90.

Condition Group	Field Measured C/L Miles	Ave. Rating Score	Percentage
Failed 0-20	4.35	10	3.8%
Poor 21-48	25.65	36	22.4%
Fair 49-67	30.70	58	26.8%
Good 68-88	39.80	75	34.7%
Excellent 89-100	14.23	96	12.4%

Distribution of collectors within the pavement condition rating groups

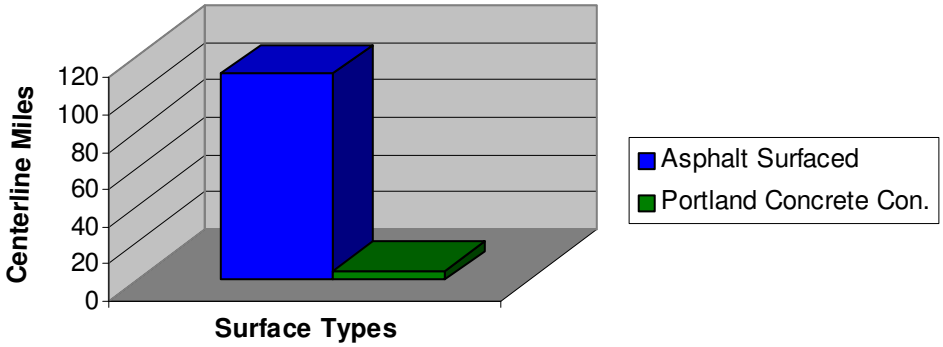


Collector centerline mileage within the condition groups

Surface Types: The following table and chart show the distribution of the pavement surface types within the collector network. As would be expected, the majority of the lane mileage is comprised of asphalt concrete pavement at 96.1%. Portland Cement Concrete makes up only 3.9% of the surfacing.

Pavement Type	Field Measured C/L Miles	Ave. Rating Score	Percentage
Asphalt Surfaced	110.21	63	96.1%
Portland Cement Concrete	4.52	62	3.9%

Collector surface types



Collector centerline mileage by surface type